REMARKS

Claims 16-21 remain pending in the application. Claim 16 is amended to remove a minor potential antecedent basis issue. Claim 21 is placed in independent form. Claims 23-26 are added, and correspond generally to Claims 17-20 but depend from Claim 21. No new matter is added.

Based on the above Amendment and the following Remarks, Applicant respectfully requests that the examiner reconsider and withdraw all outstanding objections and rejections.

Rejection under 35 U.S.C. § 102(a)

The examiner has rejected Claims 16-21 as being anticipated by the "An Object State Test Model: Object State Diagram," *Proceedings* of the 1995 conference of the Centre for Advance Studies on Collaborative Research, November 1995, pp 1-14 (Gao *et al.*). Concerning independent Claim 16, the Office Action refers vaguely to extended passages on pages 3, 5 and 9 of the Gao *et al.* article. The Office Action does not express consideration of the limitations in dependent Claims 17, 18, 19, 20, and 21. The explanation of rejection closes by advising Applicant to read the cited art carefully.

Applicant respectfully traverses the rejection.

As noted extensively throughout Applicant's disclosure, the pending claims are directed to method for measuring the *complexity* . In particular, independent Claim 16, is directed to a method of measuring the complexity of nested object state transition diagrams. The second and final step of Claim 16 specifically recites determining a complexity of a plurality of graphs:

> 16. (Currently Amended) A computer-implemented method for measuring a *complexity* of nested object state transition diagrams that are represented as data structures in the computer, the method comprising:
>   a) using the computer, determining a plurality of graphs of object state transitions at K levels l_k, wherein:
>   (A) $0 < k < K$;
>   (B) one or more of said graphs at level l_k+1 are expansions of one or more of said graphs at level l_k; and
>   (C) said graphs comprise a plurality of nodes to represent a corresponding plurality of states of use-cases and a plurality of edges to represent a corresponding plurality of transitions between the states; and
>   b) using the computer, determining a *complexity* for said plurality of graphs. (emphasis added)

In distinct contrast to Applicant's complexity measuring method, Gao *et al.* propose an object state *test model* called an object state diagram (OSD).[1] Gao's OSD captures state-dependent *behavior* of objects in an object-oriented programs.[2] Gao *et al.* admit that the OSD is an extension of existing state models.[3] The article characterizes object state *testing* as checking each state and each transition in every class object.[4] Gao's OSD model is defined for *testing*,[5] rather than modeling.

The portions of the Gao *et al.* article to which the Office Action refers, focus on details of state diagrams constituting the OSD test model. This perception may be at the basis of the rejection. However, Applicant is not claiming state diagrams in general, or test model object state diagrams in particular. Rather, Applicant claims a complexity measuring method.

Since Gao *et al.* focus on *testing*, Gao *et al.* do not apparently even mention the concept of determining *complexity* as understood in the context of Applicant's claims. Accordingly, even though Gao *et al.* refer generally to state diagrams, Gao *et al.* do not disclose, suggest or teach a *complexity* measuring method of any kind, much less a complexity measuring method that is specifically recited in Applicant's claims. Thus, Applicant submits that Claim 16, and all its dependent claims, are allowable over the Gao *et al.* article.

Claim 21 has been placed in independent form, with new dependent Claims 23-26 being added. The text in Claims 23-26 is copied from that in Claims 17-20.

Applicant does not acquiesce in the Office Action's assertion that "Gao *et al.* teaches cited limitations in the claim language which is similar to...claim 16." The details of Claims 17-21 are not disclosed in the Gao *et al.* article. For example, nothing in the Gao *et al.* article remotely suggests Claim 21's recitation of measuring a nested object state transition complexity between two super-states by recursively applying Equation 6:

$$STPC_{k,p,q} = \sum_{i=1}^{m_k} (\prod_{j=1}^{n_{k,i}} (C_{k,i,j} + (STPC_{k+1,i,j} - sub_{k,i,j})) + mul_{k,i}(N))$$

Equation 6

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[1] Gao *et al.*, last paragraph of page 1.
[2] Gao *et al.*, last paragraph of page 1.
[3] Gao *et al.*, Abstract.
[4] Gao *et al.*, Introduction, first paragraph.
[5] Gao *et al.*, first paragraph of page 2.

Accordingly, for at least the reasons presented above, Claims 21 and 23-26 should also be allowable.

More generally, Applicant emphasizes:

> ...for anticipation under 35 U.S.C. § 102, the reference *must teach* every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught *must be* inherently present.[6]

> A claim is anticipated only if *each and every* element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." [citation omitted] "The *identical invention* must be shown in *as complete detail* as is contained in the ... claim. [citation omitted].[7]

For at least the reasons presented above, Applicants respectfully request that the examiner reconsider and withdraw the rejection of Claims 16-21, and pass Claims 16-21, 23-26 to issue.

If the examiner persists in rejecting any claim, Applicant earnestly requests that the examiner specifically identify, by figure number and reference numeral and/or by column/page and line number, which items in the cited art are being relied upon to teach each claim limitation. This specific correlation between disclosed items and claim limitations is needed in order to expedite examination and provide Applicant a fair opportunity to evaluate any issues and respond accordingly.

Formal Drawings

Applicant again requests that the examiner affirmatively indicate acceptance of the formal drawings previously submitted in this case.

Conclusion

All objections and rejections have been complied with, properly traversed, or rendered moot. Thus, it now appears that the application is in condition for allowance. Should any questions arise, the examiner is invited to call the undersigned representative so that this case may receive an early Notice of Allowance.

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[6] MPEP § 706.02(a), subsection entitled DISTINCTION BETWEEN 35 U.S.C. 102 AND 103 (emphasis added).
[7] MPEP § 2131 (emphasis added).

Favorable consideration and allowance are earnestly solicited.

Respectfully submitted,

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